



Iowa DOT Image Catalog

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Presentation Outline

- Problem addressed
- Desired data
- Technologies
- Project needs
- Application
- Benefits
- Future
- Summary\Conclusion



Problems Addressed

- Data Storage /Format
 - Original DOQQ's GeoTiff's size
 - 45-50MB per image
 - Disk space
 - 300GB of digital imagery (Uncompressed)
 - LAN traffic
- Solution
 - Compress images

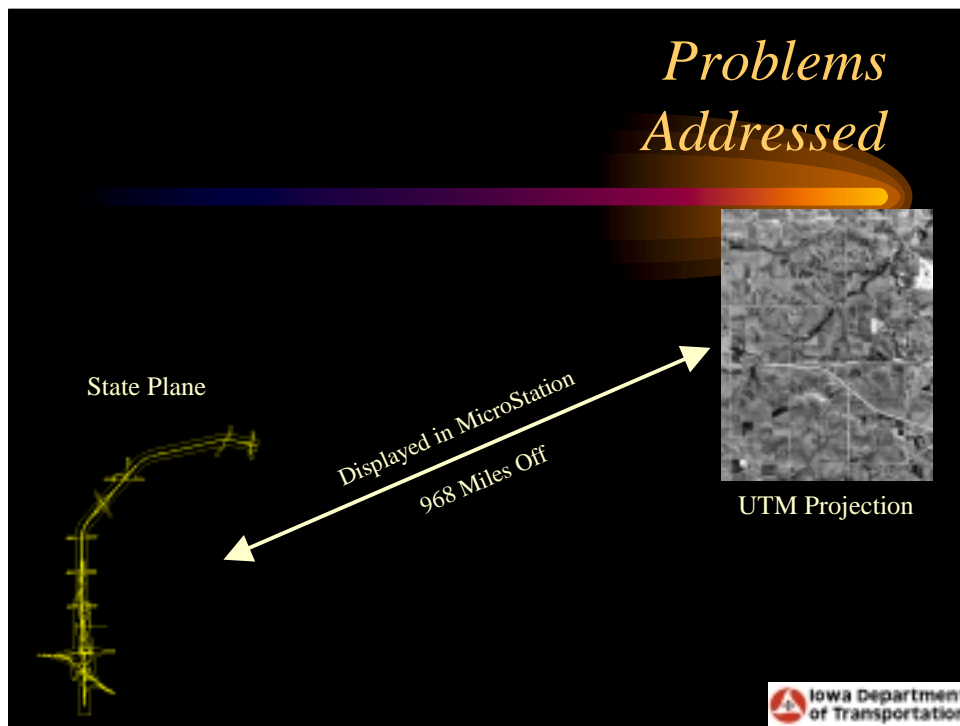


Problems Addressed

- Projection/Georeferencing
 - Original DOQQ's UTM\NAD83
 - MicroStation design files in State Plane\NAD83
 - No image viewing software on MicroStation
- Solution
 - Transform USGS DOQQ's from UTM\NAD83 to Iowa State Plane North and South



Problems Addressed



Problems Addressed

- Access to data
 - Many servers and directories throughout DOT
 - One stop geo-imagery shopping
 - Satellite images
 - Aerial photos (DOQQs, county and regional flown)
 - Digital Raster Graphs (DRGs)
- Solution
 - Map interface needed to show availability and location on LAN of all images

Data Desired

- Data Needed
 - Digital Ortho Quarter Quads (DOQQ's)
 - Digital Raster Graphs (DRG's)
 - Satellite imagery
 - County aerial flights
 - Iowa DOT aerial flights
 - Iowa DOT centerline data
 - County borders
 - Rivers and other needed reference features



Technologies Used

- Software capable of reprojecting images
 - Intergraph's Image Analyst
- Image compression software
 - Lizard Tech's Mr.Sid
- Web Environment
 - IIS technology
 - GeoMedia Web Map
 - Browser plug-in



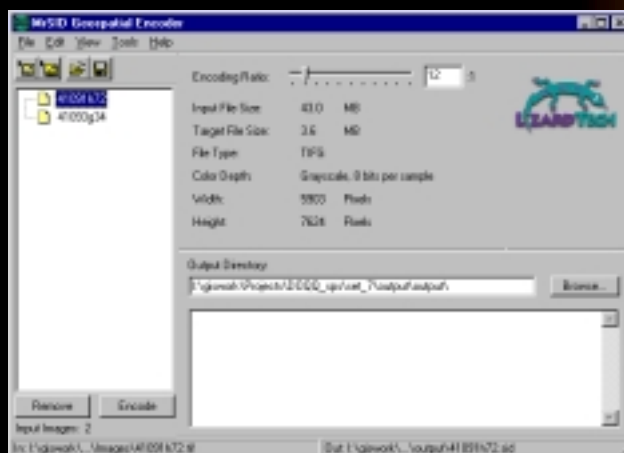
Intergraph's Image Analysis



- Image reprojection was done in batch mode



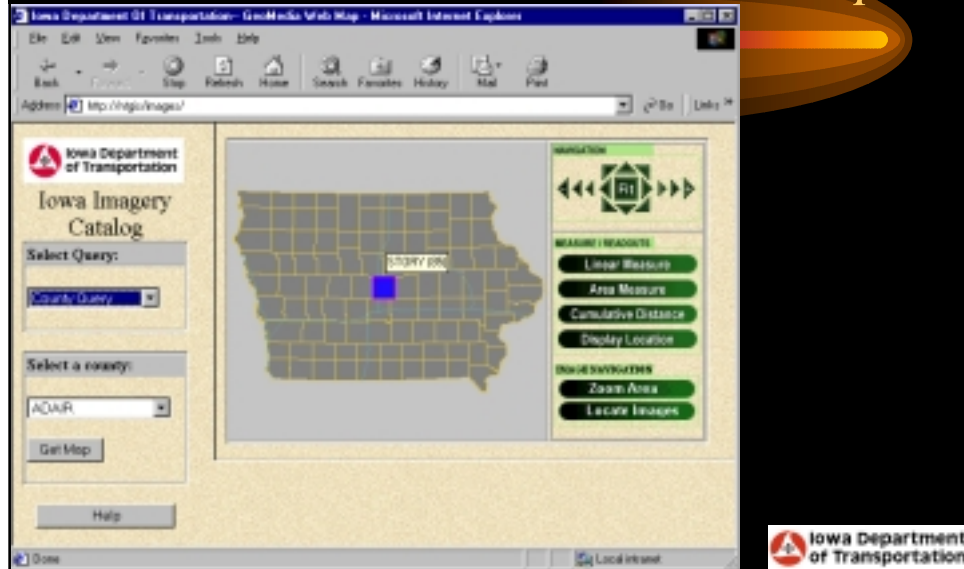
Lizard Tech's Mr.Sid



- Processing was done in semi-batch mode



Intergraph's GeoMedia Web Map



Project Tasks

- Develop web page
- Transform images
- Compress images
- Develop a plan to maintain the page and imagery

Project Scope

- Contract with Intergraph
 - Develop the initial web page
 - Train Iowa DOT staff to maintain web page
- Internal Staff
 - Reproject images from UTM to State Plane
 - Compress all images
- Maintenance
 - Trained staff maintain web page
 - Add additional images and functionality as needed.

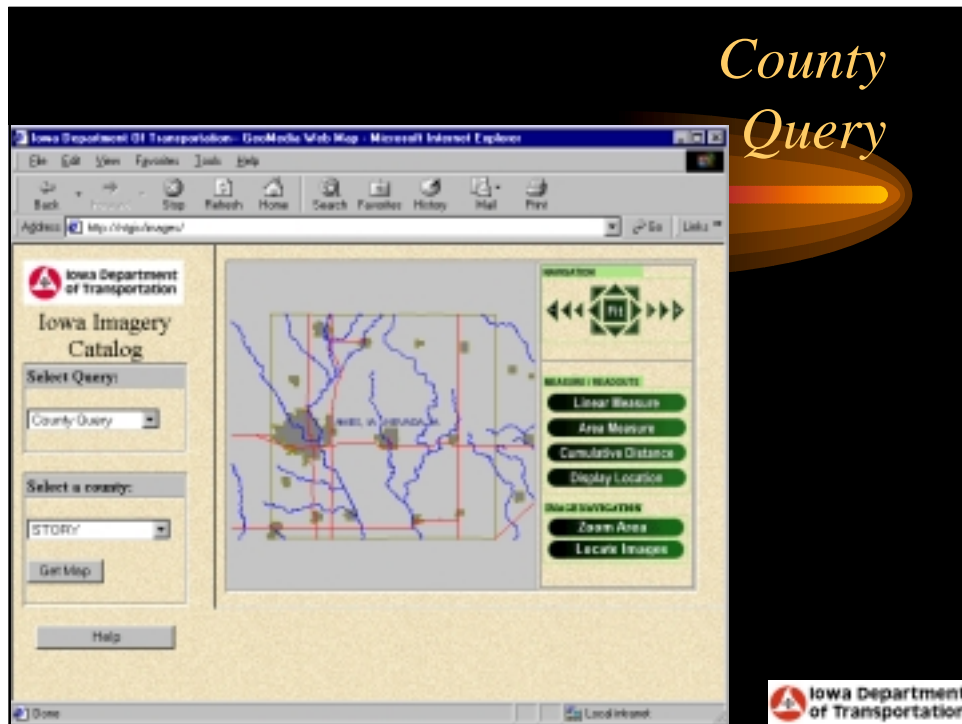


Application

- General Workflow
 - Zoom to your area of interest
 - County Query
 - City Query
 - Intersection Query
 - Locate Images
 - Locate Images Tool
 - Place a rectangle around area
 - View Images
 - Click on Image Name (hyperlink)



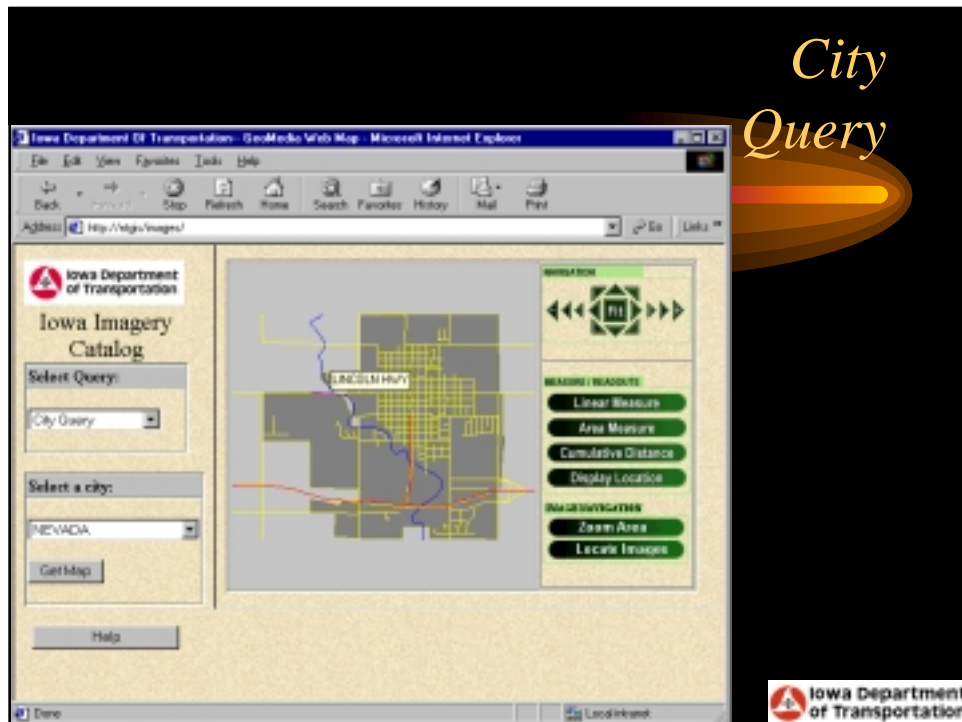
County Query



Application

- General workflow
 - Zoom to your area of interest
 - County query
 - City query
 - Intersection query
 - Locate images
 - Locate images tool
 - Place a rectangle around area
 - View images
 - Click on image name (hyperlink)

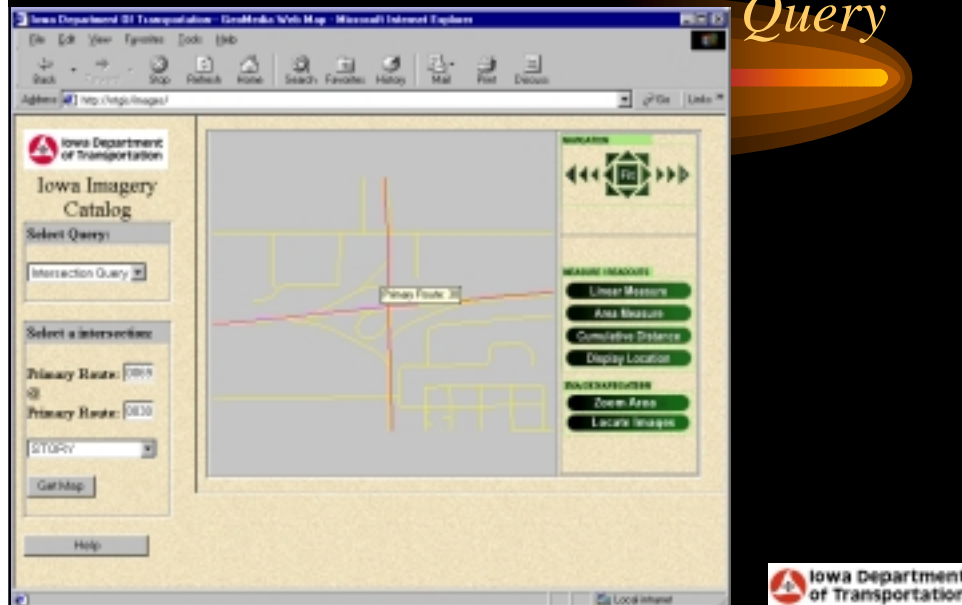
City Query



Application

- General workflow
 - Zoom to your area of interest
 - County query
 - City query
 - Intersection query
 - Locate images
 - Locate images tool
 - Place a rectangle around area
 - View images
 - Click on image name (hyperlink)

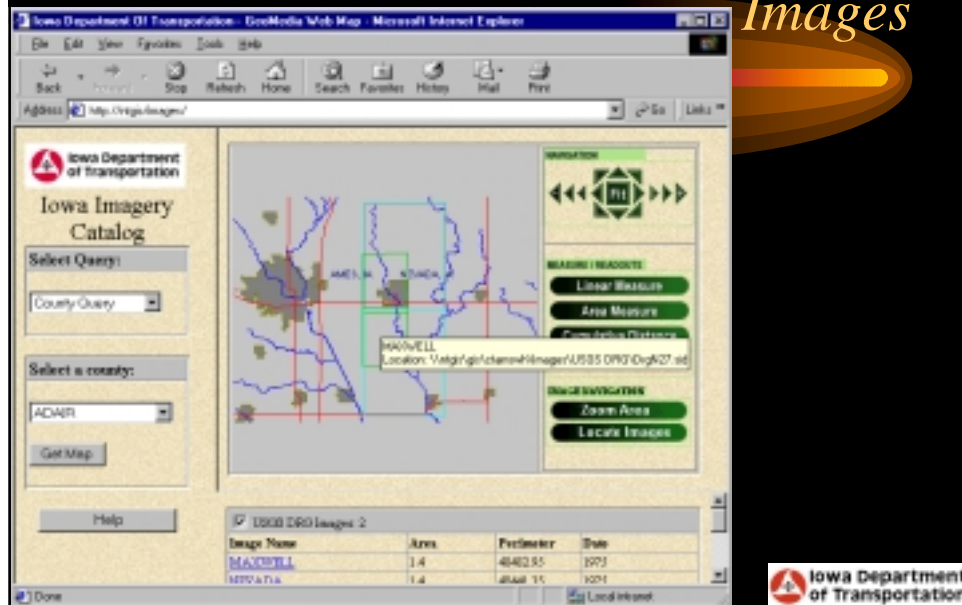
Intersection Query



Application

- General workflow
 - Zoom to your area of interest
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 - City query
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 - Locate images
 - **Locate images tool**
 - Place a rectangle around area
 - View images
 - Click on image name (hyperlink)

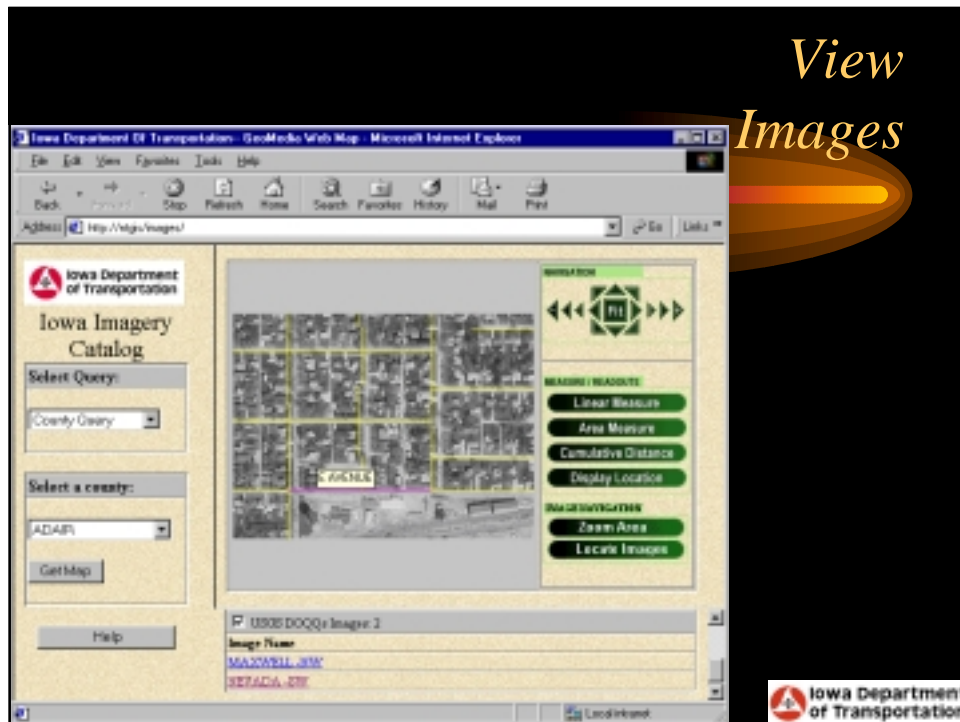
Locate Images



Application

- General workflow
 - Zoom to your area of interest
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View Images



Benefits

- Provided method to find imagery on LAN
- No need to use CD's
- No need for a DOT employee to act as a librarian for the image CDs
- Easy way to look at imagery, map features
- Introduced web-enabled GIS to DOT
- DOT-wide access
- Immediate access

Future

- Additional images added to the application
- Better metadata for images
- Simplify image query component
- More web page development
 - HARN control point web page
 - Traffic volume web page
 - Asset management pages



Summary Conclusion

- Project was a success
 - Provided more data access
 - Eliminated human intervention in the access
- Provided a valuable tool
 - Many people are accessing the page
 - No special desktop software needed to view imagery
- Allowed Iowa DOT employees to see other uses of web-enabled GIS



Questions?

